

### **REMARKS**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 2, 5-15, 18-26 and 29-30 are canceled. Claims 27, 28, 31, 32 and 44 are currently being amended. Claims 1, 3, 4, 16-17, and 39 are withdrawn. After amending the claims set forth above, claims 27, 28, 31-38, and 40-44 are pending in this application.

Because no new matter has been added, applicants request that the examiner enter these amendments.

#### **Rejection under 35 U.S.C. § 101**

Claims 27 and 28 were rejected for covering non-statutory subject matter. As suggested by the examiner on pages 2 and 3 of the March 23, 2004 Office Action, these claims have been amended to include “a computer readable medium encoded with a program.”

Applicants believe that the amended claims now fall within the statutory subject matter recited in 35 U.S.C. § 101. Therefore, applicants request the withdrawal of this rejection.

#### **Rejection under 35 U.S.C. § 112, second paragraph**

Claims 31, 32, and 44 are rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. As set forth above, these claims have been amended according to the examiner’s suggestions in the March 23, 2004 office action.

Specifically, claim 31 (i) has been amended to clarify that each side chain is “represented by a  $C_{\alpha}$ -  $C_{\beta}$  vector. Further, claim 31 (ii) has been amended so that it creates a query that distinctly describes the location and orientation of “each side chain.” Finally,

claim 31 (vi) was amended to clarify that an engineered framework protein was created “having” a particular property, characteristic, or function.

Additionally, applicants have amended claim 32 to clarify the subject matter covered by this claim, and claim 44 to particularly point out and distinctly claim the filtering process described on pages 18 and 19 of the specification. Similarly, applicants have amended claim 28 to distinctly claim its filtering process as requested by the examiner in her telephone message of July 21, 2004.

Applicants believe that these amendments particularly point out and distinctly claim the subject matter of the invention. As such, applicants request that this rejection be withdrawn.

#### **Rejection under 35 U.S.C. 102(b)**

Claims 27 and 28 were rejected under 102(b) as being anticipated by Lauri et al. Applicants have amended claims 27 and 28 to specify that the present invention defines hits according to vector matches that are determined by a comparison of “unbinned” distances between the respective distance matrix representations of the query and database entry. Support for this amendment can be found on page 28, line 19 – page 29, line 14 of the specification, which describes the creation of a single library containing all of the  $C_{\alpha}$ -  $C_{\beta}$  vectors for the designed proteins. Unlike Lauri et al., which organizes its database of vector pairs in indexed bins, which point to a list of proteins in the database having the same structure, the present invention stores the 3D coordinates of all of the  $C_{\alpha}$ -  $C_{\beta}$  vectors for the designed proteins in a single unbinned database.

Applicants believe that this amendment distinguishes the present invention from the Lauri et al. reference and therefore, respectfully request the withdrawal of this ground for rejection.

**Conclusion**

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

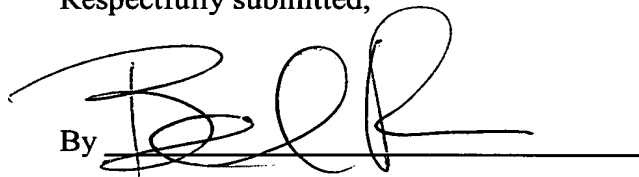
The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date

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By



FOLEY & LARDNER LLP  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5143  
Telephone: (202) 672-5475  
Facsimile: (202) 672-5399

Beth A. Burrous  
Attorney for Applicant  
Registration No. 35,087